

## Municipal Zoning Options for Adaptation to Sea Level Rise in Connecticut

---

Prepared for The Nature Conservancy by Brian Ambrette. June 7, 2013.

Fortunately for municipal planners, there are adaptation options that coastal towns can implement under existing state and federal laws. Options that to be considered include more resilient building codes, property acquisitions or easements, and tax incentives.<sup>1</sup> This paper will focus in particular on municipal zoning options.

### Overlay Zoning

Overlay zones work in concert with existing zoning to apply an additional layer of regulation in areas that have special characteristics. Coastal overlays may prescribe SLR-informed building regulations such as setback, elevation, and freeboard requirements; building footprint and height restrictions; and construction requirements such as breakaway walls on floors below the base flood elevation.<sup>2</sup> The overlays may also set development densities or water-dependent use requirements to assist in coastal growth management and/or gradually move development out of high flood-risk areas. Overlays can also prioritize areas for conservation based on flood-buffering potential or other ecosystem services.

The Town of Greenwich, CT has implemented a Coastal Overlay Zone intended, among other purposes, to “limit the potential impact of coastal flooding and erosion patterns on coastal development so as to minimize damage to and destruction of life and property and to reduce the necessity of public expenditure to protect future development from such hazards.” Development projects within the zone require a Coastal Site Plan detailing the project’s water-dependent activity and a “description of proposed methods to mitigate adverse effects on coastal resources.”<sup>3</sup>

The Town of Stonington, CT has implemented a Coastal Area Management Overlay District, a Flood Hazard Overlay District, and a Groundwater Protection Overlay District. The

---

<sup>1</sup> A superb resource for planners who are exploring adaptation measures is the Georgetown Climate Center’s Adaptation Toolkit: <http://www.georgetownclimate.org/resources/adaptation-tool-kit-sea-level-rise-and-coastal-land-use>

<sup>2</sup> For an example of flood zone construction requirements, see the City of Waveland, Mississippi Flood Damage Prevention Ordinance Number 342, Section E. Coastal High Hazard Areas, p.18: <http://www.georgetownclimate.org/sites/default/files/CITY%20OF%20WAVELAND%20ordinance%20342.pdf>

<sup>3</sup> Greenwich Municipal Code, Division 9, Section 6-111. <http://www.greenwichct.org/upload/medialibrary/23f/pzRegsDivision09.pdf>

Coastal Area Management District encompasses the 100-year coastal floodplain and all areas within 1000 feet of the mean high water mark and coastal wetlands. Within the district, the town may require additional erosion controls or conservation easements.<sup>4</sup>

Another overlay zoning approach is to identify zones based on SLR adaptation goals.<sup>5</sup> The zones can be delineated by a combination of existing development density, dominant use, public utility services (sewer, water, etc.), elevation contours, and erosion rates. A town could divide the 100-year (or 500-year) floodplain into the following overlays:

- A Protection Zone for areas with critical infrastructure and dense development that have few options for adaptation. These areas, which may include town centers and historic districts, likely rely on existing hard armoring for flood protection and erosion control. Maintenance of existing hardened flood protection structures may be permitted while other resiliency practices are encouraged, such as employing green infrastructure for stormwater control.
- An Accommodation Zone for moderately to intensely developed but non-critical areas promotes development that considers future SLR. Downzoning to lower impact uses reduces risk exposure. Building codes are strengthened with setback, elevation, freeboard, and construction requirements; as well as limits on structure height and footprint size. Shoreline armoring is restricted to soft or natural solutions.
- A Conservation Zone includes areas that either provide the greatest natural protection or have non-critical structures at the greatest risk of extensive damage. The purpose is to gradually move development out of these areas and replace it with natural protection, marsh advancement areas, open space, or public access. This can be achieved by downzoning to low density, water-dependent purposes. Shoreline armoring is restricted to natural solutions. Maximum setbacks aim to move any new development landward. Rebuilding damaged structures is also restricted. Property acquisition and conservation programs are focused on this area.

Maryland has a tiered zoning structure, similar to the one just described, under its Chesapeake Bay Critical Areas Program.<sup>6</sup> The program seeks to improve water quality and resource protection by regulating development near the Bay. Existing residential dwelling density, public services, and primary land use are used to identify three overlay zones:

---

<sup>4</sup> Stonington Zoning Regulations, Article 7.3. [http://www.stonington-ct.gov/Pages/StoningtonCT\\_Planning/regs/ZR\\_E23\\_7\\_1\\_11.pdf](http://www.stonington-ct.gov/Pages/StoningtonCT_Planning/regs/ZR_E23_7_1_11.pdf)

<sup>5</sup> Grannis, J. 2012. *Coastal Management in the Face of Rising Seas: Legal Strategies for Connecticut*. Sea Grant Law & Policy Journal. vol. 5.1.

<sup>6</sup> Maryland Department of Natural Resources. *Bay Smart: A Citizen's Guide to Maryland's Critical Area Program*. <http://www.dnr.state.md.us/criticalarea/BaySmartGuide.asp>

- Intensely Developed Areas (IDA's) with either greater than 4 dwelling units per acre; or greater than 3 dwelling units per acre plus public sewer and water; or high industrial or commercial uses,
- Limited Development Areas (LDA's) with either 0.2-4 dwelling units per acre and public sewer and water; or areas not dominated by agriculture, wetland, or open space, and
- Resources Conservation Areas (RCA's) with less than 1 dwelling unit per 5 acres; or areas with a dominant use of agriculture, wetland, or open space.

## Downzoning

A powerful tool that planners can employ is downzoning from more dense or intense use to low density or low impact use. Downzoning can be used with or without overlay zoning. The Connecticut Coastal Management Act authorizes municipalities to employ downzoning (which, along with setbacks and special use zones, are not authorized under the Zoning Enabling Act (ZEA)) to regulate development in coastal areas.<sup>7</sup> Low density, low intensity uses that could be promoted by downzoning include low density residential (e.g. less than 1 unit per 20 acres), agriculture, recreational space, open space, and water-dependent use.

## Subdivisions and Cluster Development

Cluster development allows a developer to subdivide and build in greater density than zoning regulations permit, provided that a specified percentage of the parcel is set aside as open space. For example, a developer wants to subdivide a 50 acre parcel into 50 lots. Existing zoning regulations specify a 1 acre minimum lot size. Under cluster development, the developer agrees to set aside 50% of the parcel, or 25 acres, for open space in return for permission to subdivide to half acre lots. In coastal areas, cluster development regulations specify that the upland or landward portion of the lot be developed while the low-lying portion is reserved for soft or natural flood protection. The developer is incentivized to adopt cluster development practices by a streamlined application process or by earning a building density bonus on the upland lots. In Chatham County, Georgia, developers are permitted to increase a project's density by 10% above regulations if 40% of the land is reserved for conservation.<sup>8</sup>

---

<sup>7</sup> Grannis, J. 2012. *Coastal Management in the Face of Rising Seas: Legal Strategies for Connecticut*. Sea Grant Law & Policy Journal. vol 5.1.

<sup>8</sup> Grannis, J. 2011. *Adaptation Toolkit: Sea-Level Rise and Coastal Land Use*. Georgetown Climate Center. p34.

## Legal Challenges: Nonconformities and Takings

Overlay zoning and, in particular, downzoning are not without challenges. New zoning regulations will likely result in land uses that had been legal under the previous rules but no longer conform to current zoning requirements. The effectiveness of downzoning may be limited because the ZEA requires that nonconforming uses be allowed and preserved even when a structure is damaged or destroyed. However, when that structure is repaired or rebuilt, it will be subject to any additional SLR-informed construction regulations under the new zoning. These regulations may include freeboard minimums, as well as footprint and height limitations. Only when a use is *abandoned* (as opposed to having been idle or destroyed) may the new use requirements be enforced. However, the courts may be more likely to rule in favor of use enforcement when a structure is destroyed by a natural disaster such as coastal flooding, but the case law is not yet established on this point.<sup>9</sup>

Another challenge in designing SLR adaptation zoning regulations is to avoid instances of “taking” in which a government seizes a property or, more often with zoning, adversely affects the value of a property through regulation without just compensation to the owner. For example, regulations under a new overlay may seek to prohibit rebuilding after a storm, or setback requirements may leave an owner without space on the property to rebuild. Courts may rule these scenarios as takings. Typically, the Connecticut courts have ruled against zoning regulations when a taking results in a substantial decrease in economic value to the land owner.<sup>10</sup> However, the U.S. Supreme Court has left room for an owner’s loss of economic value to be balanced against the public good.<sup>11 12</sup>

---

<sup>9</sup> *Ibid.*

<sup>10</sup> *Ibid.*

<sup>11</sup> McGuire, C. and Hill J. 2012. *Climate Adaptation and the Fifth Amendment of the U.S. Constitution: A Regulatory Takings Analysis of Adaptation Strategies in Coastal Development with Application to Connecticut’s Coastal Management Regime*. Sea Grant Law & Policy Journal. vol 5.1.

<sup>12</sup> For a more thorough and Connecticut-specific discussion of takings and other legal issues with adaptation measures, see the Sea Grant Law & Policy Journal, volume 5, p. 77-79 and 140-168:

<http://nsglc.olemiss.edu/SGLPJ/SGLPJVol5No1.htm>